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(12) UK Patent Application (19) GB (11) 2 283 526 (13) A

(43) Date of A Publication 10.05.1995

(21) Application No 9322577.9

(22) Date of Filing 02.11.1993

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(51) INT CL⁶

E04G 21/32

(52) UK CL (Edition N)

E1S SL

(56) Documents Cited

GB 2251020 A

GB 2071196 A

(58) Field of Search

UK CL (Edition M) E1S SL

INT CL⁵ E04G 21/32

(54) Roof anchor

(57) A roof anchor (1) is provided for fitting to the roof of a building and serves to receive a harness line of a workman's safety harness to enable the workman to work safely on the roof. The roof anchor (1) comprises a first assemblage including a first clamping plate (4) and a threaded stud (5) welded to the plate (4) so as to extend solely from one side thereof, a second clamping plate (7), and a threaded member e.g. an eye bolt (6) to extend through apertures in the clamping plates (4, 7) parallel to the stud (5), the arrangement being such that the clamping plates (4, 7) are clamped to a roof beam (10) by means of nuts (16, 17) screwed on to the stud (5) and the eye bolt (6). More especially in an initial installing step the plate (4) of the first assemblage can be slid over the beam (10) below roof sheeting (11) for convenient retro-fitting of the anchor (1) on a roof.

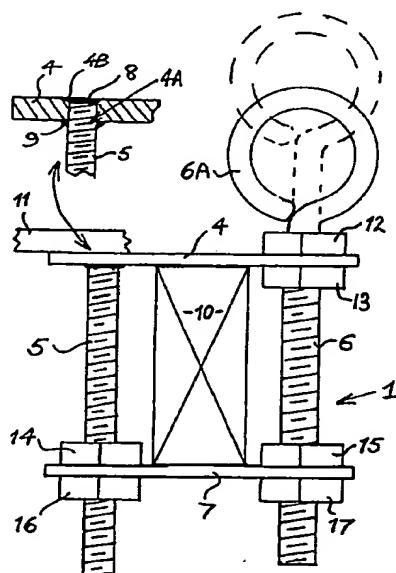


Fig 1

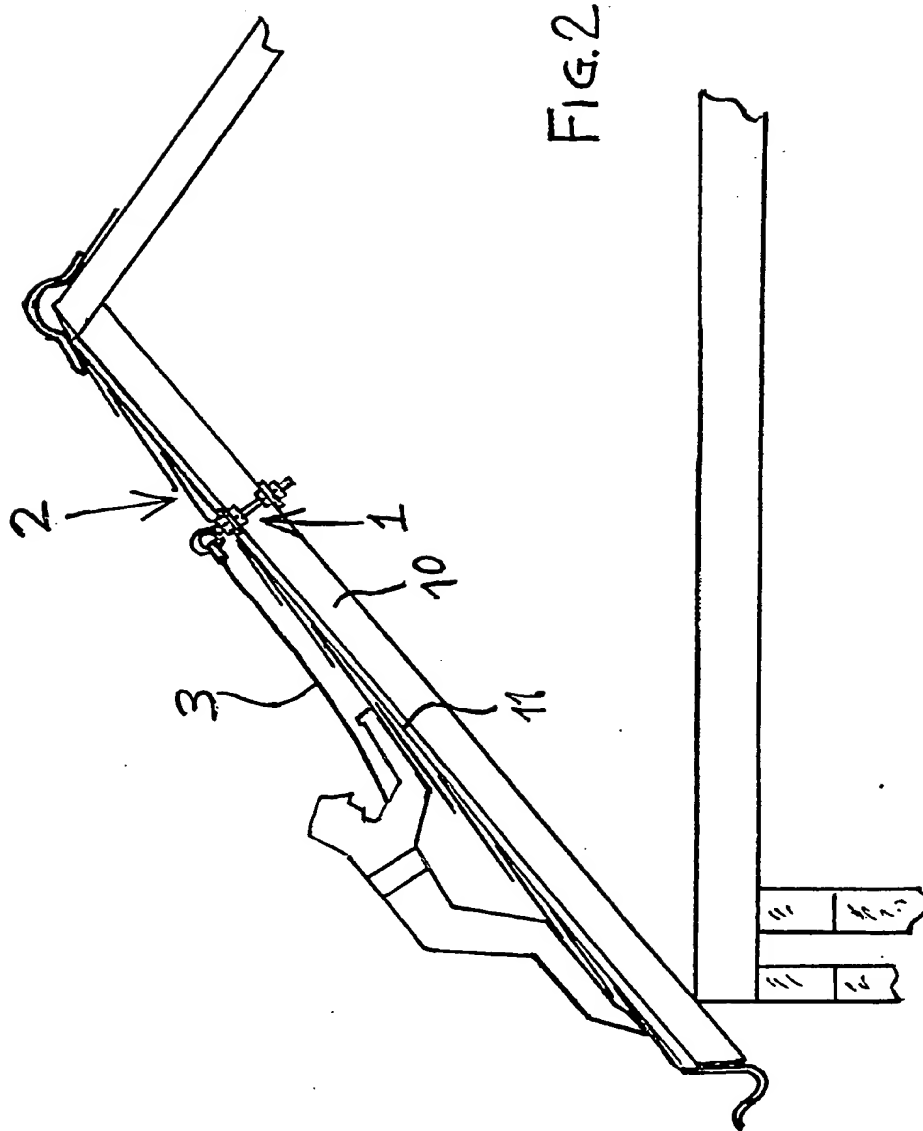
At least one drawing originally filed was informal and the print reproduced here is taken from a later filed formal copy.

The claims were filed later than the filing date within the period prescribed by Rule 25(1) of the Patents Rules 1990.

GB 2 283 526 A



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"ROOF ANCHOR"

The present invention relates to a roof anchor to receive the harness line of a safety harness worn by a workman on the roof, and more especially to a roof anchor for fitting on a sloping part of a roof.

Roof anchors are known for fitting to roof members so as to provide an eye or the like standing proud of the roof for receiving the harness line of a safety harness worn by a workman so enabling the workman to work safely on the roof. However, these prior roof anchors have been of relatively complex construction. It is an object of the present invention to provide a roof anchor fittable to a sloping part of a roof which is of relatively simple and economic construction but which can be conveniently retro-fitted to the roof.

According to the present invention a roof anchor for receiving a safety harness line comprises a first member adapted to fit over a roof beam, rafter of the like and lie under roof sheeting at said beam, said first member including a first threaded fastening element, a second member comprising a second threaded fastening element extending parallel to said first threaded element and including a receiving device, e.g. eye or the like for a harness safety line, and a third member in the form of a plate for location on the roof beam oppositely to the first member, said first and third members being clamped to the beam by said first and second threaded elements.

Preferably the first member comprises a plate with a threaded stud constituting said first threaded element fixedly secured to said plate.

Preferably, said plate of the first member includes an aperture to receive an end of said stud, said stud being welded to the plate at said aperture.

An embodiment of the present invention will now be described by way of example with reference to the accompanying drawings wherein:-

Fig. 1 shows a side elevation of a roof anchor for a safety harness line in accordance with the present invention; and

Fig. 2 shows schematically part of a roof construction in end view showing a possible location of the roof anchor of Fig. 1.

Referring to the drawings, a roof anchor 1 is provided for fitting on a sloping part 2 of a roof to receive a tethering line 3 if a safety harness the anchor 1 comprising a first member having a plate 4 and a threaded stud 5 permanently fixed to the plate 4, a second member in the form of an eye bolt 6, and a third member comprising a plate 7. As shown in the detail of Fig. 1, the stud 5 is received in an aperture 4A of the plate 4 such that the outer end of the stud 5 lies just below the plate's outer surface and at a bevelled portion 4B of the aperture 4A; the stud 5 is permanently fixed by means of the welds 8, 9 shown. Thus the stud 5 does not project beyond the plates outer surface enabling the resulting smooth outer surface of the plate to fit below a roof sheeting 10.

To fit the roof anchor 1, the first member 4, 5 is inserted over the top of a timber rafter 11 (or similar beam) so as to lie below the roof sheeting 10, the eye bolt 6 is then inserted through a prepared aperture in the roof part 2 so as to extend through the plate 4, the eye bolt 6 being positioned appropriately by lock nuts 12, 13, the bottom plate 7 is placed on the parallel extending threaded member 5, 6, lock nuts 14, 15 firstly being positioned, and finally the two plates 4, 7 are clamped to the rafter 10 by means of nuts 16, 17 fitted on the members 5, 6, the locking operation being completed by tightening the lock nuts 14, 15 down on to the plate 7. The eye 6A of the bolt 6 can of course be located at any desired position by means of the nuts, 12, 13 - an alternative position is shown dashed. The aperture in roof part 2 through which the eye bolt 6 passes will be suitably sealed.

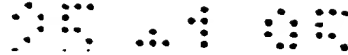
The above roof anchor 1 of the present invention can remain securely fixed to the roof beam (rafter) for a great

many years without risk of slackening, so providing ready availability for use. In particular the permanent welding of the stud 5 to the plate 4 is especially beneficial as slackening of the stud at this location would be difficult to remedy when the roof anchor is installed. As will be appreciated the roof anchor 1 can be readily retro-fitted to a roof.

Modifications are of course possible, for example, the plates 4, 7 could be of different shape from those shown.

CLAIMS

1. A roof anchor for receiving a safety harness line comprising a first member adapted to fit over a roof beam, rafter or the like and lie under roof sheeting at said beam, said first member including a first threaded fastening element, a second member comprising a second threaded fastening element extending parallel to said first threaded element and including a receiving device, e.g. eye or the like for a harness safety line, and a third member in the form of a plate for location on the roof beam oppositely to the first member, said first and third members being clamped to the beam by means of said first and second threaded elements.
2. A roof anchor as claimed in claim 1, wherein, the first member comprises a plate with a threaded stud constituting said first threaded element fixedly secured to said plate.
3. A roof anchor as claimed in claim 2, wherein the threaded stud extends solely from one side of said plate.
4. A roof anchor as claimed in claim 2 or 3, wherein said plate of the first member includes an aperture to receive an end of said stud, said stud being welded to the plate at said aperture.
5. A roof anchor as claimed in any one of the preceding claims, wherein nuts co-operate with said threaded fastening elements for clamping of said first and third members on a roof beam.
6. A roof anchor as claimed in any one of the preceding claims, wherein additional nuts on the second member co-operate with said first member for positioning of the second member.
7. A roof anchor substantially as hereinbefore described with reference to and as illustrated in the accompanying drawings.



Amendments to the claims have been filed as follows

CLAIMS

1. A roof anchor for receiving a safety harness line comprising a first member adapted to fit over a roof beam, rafter or the like and lie under roof sheeting at said beam, a first threaded fastening element for clamping of the roof anchor, a second member comprising a second threaded fastening element extending parallel to said first threaded element and including a receiving device, e.g. eye or the like for a harness safety line, and a third member in the form of a plate for location on the roof beam oppositely to the first member, said first and third members being clamped to the beam by means of said first and second threaded elements, the arrangement being such that the first member can be inserted between a roof beam and roof sheeting overlying the beam prior to clamping of the first and third members to the beam by said first and second threaded elements.
2. A roof anchor as claimed in claim 1, wherein the first member comprises a plate with a threaded stud constituting said first threaded element fixedly secured to said plate.
3. A roof anchor as claimed in claim 2, wherein the threaded stud extends solely from one side of said plate.
4. A roof anchor as claimed in claim 2 or 3, wherein said plate of the first member includes an aperture to receive an end of said stud, said stud being welded to the plate at said aperture.
5. A roof anchor as claimed in any one of the preceding claims, wherein nuts co-operate with said threaded fastening elements for clamping of said first and third members on a roof beam.
6. A roof anchor as claimed in any one of the preceding claims, wherein additional nuts on the second member co-operate with said first member for positioning of the second member.
7. A roof anchor substantially as hereinbefore described with reference to and as illustrated in the accompanying drawings.

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Patents Act 1977
Examiner's report to the Comptroller under Section 17
(First Search report)

Application number
 GB 9322577.9

Relevant Technical Fields

- (i) UK Cl (Ed.M) E1S (SL)
 (ii) Int Cl (Ed.5) E04G 21/32

Search Examiner
 MR A MITCHELL

Date of completion of Search
 20 DECEMBER 1994

Databases (see below)

- (i) UK Patent Office collections of GB, EP, WO and US patent specifications.

Documents considered relevant following a search in respect of Claims :-
 1-7

(ii)

Categories of documents

- | | |
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| <p>X: Document indicating lack of novelty or of inventive step.</p> <p>Y: Document indicating lack of inventive step if combined with one or more other documents of the same category.</p> <p>A: Document indicating technological background and/or state of the art.</p> | <p>P: Document published on or after the declared priority date but before the filing date of the present application.</p> <p>E: Patent document published on or after, but with priority date earlier than, the filing date of the present application.</p> <p>&: Member of the same patent family; corresponding document.</p> |
|--|---|

Category	Identity of document and relevant passages	Relevant to claim(s)
X	GB 2251020 A (CRAWFORD) u-bolt 42 acts as a first member	1, 5
A	GB 2071196 A (FULTON)	1

Databases: The UK Patent Office database comprises classified collections of GB, EP, WO and US patent specifications as outlined periodically in the Official Journal (Patents). The on-line databases considered for search are also listed periodically in the Official Journal (Patents).